COOLANT PLUS 50/50 ANTIFREEZE

Date of Preparation: 05/15

SDS No. 30032
Revision: 1

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Coolant Plus 50/50 Antifreeze
Synonyms: EG, ethylene glycol, 1, 2-ethanediol, glycol alcohol
CAS Number: 107-21-1
Chemical Formula: C6H6O2
General Use: Freezing Point Depressant
Manufacturer: KMCO, 16503 Ramsey Road, Crosby, Texas 77532

24-HOUR EMERGENCY NUMBER - CHEMTREC: 1-800-424-9300
KMCO PHONE: (281) 328-3501
FAX: (281) 328-9528

Restrictions on Use: Do not eat, drink or smoke when using this product. Wash after using this product

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Classification:

OSHA Hazards: Target Organ Effect. Harmful by Ingestion. Irritant. Teratogen
Target Organs: Liver, Cardiovascular System, Eyes, Kidney, Central Nervous System
GHS Classification:

Acute toxicity, Oral (Category 4)
Eye irritation (Category 2B)
Skin irritation (Category 3)
Specific target organ toxicity – single exposure (Category 3)
Specific target organ toxicity – repeated exposure (Category 2)

Signal Word: WARNING

9980520

Hazard Statement(s):

H302	Harmful if swallowed
H316	Causes mild skin irritation.
H320	Causes eye irritation
H335	May cause respiratory irritation.
H373	*May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

P261	Avoid breathing dust/fumes/gas/mist/vapors
P264	Wash thoroughly after handling.
P270	Do not eat drink or smoke when using this product.
P301 + P312	IF SWALLOWED: Call a POISION CENTER or doctor / physician if you feel unwell.
P330	Rinse mouth.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	1
Physical hazards:	0

NFPA Rating:

Health hazard:	2
Fire:	1
Reactivity:	0

Description of Any Other Hazards Not Otherwise Classified: none known

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT Name:	CAS NUMBER	%wt. or %v
Ethylene Glycol	107-21-1	47
Water	7732-18-5	50
Proprietary Ingredients		3

3% of the composition of this material has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. If eye irritation persists get medical advice / prevention.

SKIN: Wash off with soap and plenty of water. Call a physician,

INGESTION: IF SWALLOWED: Call a POISON CENTER or physician.
INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Contact a POISON CENTER. See remarks in Section 11.

SECTION 5: FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Water spray, water fog, dry chemical, alcohol resistant foam, carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA: Straight streams of water

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be used to keep fire exposed containers cool, protect personnel attempting to stop leak, and disperse vapors. Evacuate area. Do not release runoff from fire control methods to sewers or waterways.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Above flash point, vapor-air mixtures are explosive within the flammable limits noted below. Sealed containers may rupture when heated.

HAZARDOUS COMBUSTION PRODUCTS: Smoke, fumes, carbon oxides, unknown organic compounds

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS: Wear full protective clothing. Wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure – demand mode or positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use appropriate personal protective equipment. Avoid breathing vapors, mist or gas. Avoid contact with spilled material. Insure adequate ventilation. Remove all sources of ignition. Use non-sparking tools and equipment.

PROTECTIVE CLOTHING: Standard work uniform. Impervious gloves. Safety glasses. Personnel should increase PPE level as deemed appropriate in any given situation.

EMERGENCY PROCEDURES:

SMALL SPILLS: Contain and recover liquid when possible. Collect liquid in appropriate container or absorb with an inert material (such as vermiculite or dry sand) and place in chemical waste container. Do not use combustible materials such as sawdust for the cleanup.

LARGE SPILLS:
Containment: Shut off source of leak if safe to do so. Dike far ahead of liquid spill for later disposal. Do not allow material to enter sewers or waterways.
Cleanup: Contain and recover liquid when possible. Collect liquid in appropriate container. Absorb residue with an inert material (such as vermiculite or dry sand) and place in chemical waste container. Do not use combustible materials such as sawdust for the cleanup.

SECTION 7: HANDLING AND STORAGE

HANDLING PRECAUTIONS: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

STORAGE REQUIREMENTS: Keep container tightly closed in a dry and well ventilated place. Hygroscopic.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Controls should be such that adequate ventilation is provided.

VENTILATION: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work place by controlling it at its source.

RESPIRATORY PROTECTION: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA / NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (e.g. cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

EYE PROTECTION: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133) Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.

SKIN PROTECTION: Wear chemically protective gloves, boots, aprons and gauntlets to prevent prolonged or repeated skin contact.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Make emergency eyewash stations, safety/quick drench showers and washing facilities available in work areas.

WORK HYGIENIC PRACTICES: Never eat, drink or smoke in work areas. Practice good personal hygiene after using this material especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Separate contaminate work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment. Discard belts and shoes that cannot be cleaned.

EXPOSURE GUIDELINES:

	ppm	mg/m3
OSHA PEL-TWA:	none established	none established
OSHA PEL STEL:	none established	none established
OSHA PEL CEILING:	50 (vacated)	125 (vacated)
ACGIH TLV-TWA:	none established	none established
ACGIH TLV STEL:	none established	none established
ACGIH TLV CEILING:	none established	100

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
APPEARANCE AND COLOR: Clear, green
ODOR: Odorless
FLASH POINT: 232° F (111° C)
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: 3.2% / 15.3% v/v
AUTO IGNITION TEMPERATURE: 748° F (398° C)
DECOMPOSITION TEMPERATURE: not available
VAPOR PRESSURE: 0.06 mm Hg @ 20°C
ODOR THRESHOLD: not available
VAPOR DENSITY (air = 1): 2.1
pH: 7 – 11.5
RELATIVE DENSITY: not available
SPECIFIC GRAVITY (H2O =1 AT 4 C): 1.065 – 1.075
MELTING POINT / FREEZING POINT: -34° F
WATER SOLUBILITY: soluble
OTHER SOLUBILITIES: alcohols, methyl isobutyl carbitol
INITIAL BOILING POING AND BOILING RANGE: Range not available
EVAPORATION RATE (BuAc = 1): not available
PARTITION COEFFICIENT: n-OCTANOL/WATER: not available
VISCOSITY: not available
REFRACTIVE INDEX: not available
FORMULA WEIGHT: mixture

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: none under normal handling

STABILITY: Hygroscopic

CONDITIONS TO AVOID (STABILITY): Incompatible materials. Heat, flames and ignition sources.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids, strong oxidizing agents, strong bases, aldehydes

HAZARDOUS DECOMPOSITION BY-PRODUCTS: Carbon monoxide, carbon dioxide, unidentified organic compounds

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur

CONDITIONS TO AVOID (POLYMERIZATION): Not applicable – hazardous polymerization will not occur

HAZARDOUS POLYMERICATION BY-PRODUCTS: Not applicable – hazardous polymerization will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

SIGNS AND SYMPTOMS OF OVEREXPOSURE: When ingested early symptoms mimic alcohol inebriation and are followed by nausea, vomiting, abdominal pain, weakness, muscle tenderness, respiratory failure, convulsions, cardiovascular collapse, pulmonary edema, hypocalcemic tetany, and severe metabolic acidosis. Without treatment, death may occur in 8 to 24 hours. Victims who survive the initial toxicity period usually develop renal failure along with brain and liver damage. Exposure to and/or consumption of alcohol may increase toxic effects.

ACUTE EFFECTS:

EYE CONTACT: Causes eye irritation

SKIN CONTACT: May be harmful if absorbed through skin. Causes skin irritation

INHALATION: May be harmful if inhaled. Causes respiratory tract irritation.

INGESTION: Toxic if swallowed

TARGET ORGAN EFFECTS: no data available

CHRONIC EFFECTS: no data available

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Persons with pre-existing skin disorders, eye problem or impaired liver, kidney or respiratory function may be more susceptible to the effects of this substance

ACUTE TOXICITY VALUES

ORAL LD50 (rat): Oral LD 50, rat – 4000 mg / kg

DERMAL LD50 (rabbit): Dermal LD 50, rabbit – 10,626 mg/kg
INHALATION LC50 (state animal): no data available

LISTED CARCINOGEN:

NATIONAL TOXICOLOGY PROGRAM REPORT ON CARCINOGENS: no components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by the NTP.

IARC LISTED AS POTENTIAL CARCINOGEN: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA LISTED AS POTENTIAL CARCINOGEN: No component of the product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals

TERATOGENICITY: Laboratory experiments have shown teratogenic effects

SECTION 12: ECOLOGICAL INFORMATION

DATA FROM TOXICITY TESTS ON AQUATIC AND/OR TERRESTERIAL ORGANISMS:

Fish:	LC50 – Oncorhynchus mykiss (rainbow trout): 18,500 mg/l – 96h
	LC50 – Leuciscus idus (Golden orfe) - >10.000 mg/l – 48h
	NOEC – Pimephales promelas (fathead minnow) – 32000 mg/l – 7d
	NOEC – Pimephales promelas (fathead minnow) – 74,000 mg/l – 24h
Daphnia:	NOEC – Daphnia – 24,000 mg/l – 48h
	LC50 – Daphnia magna (Water flea) – 41,000 mg/l – 48h

ENVIRONMENTAL FATE: When released into the soil, this material is expected to readily biodegrade, is expected to leach into groundwater and is not expected to evaporate significantly. When released into the water, this material is expected to readily biodegrade, and is expected to have a half-life between 1 and 10 days. When released into the air, this material is expected to be readily degraded, and is expected to have a half-life between 1 and 10 days.

BIOACCUMULATION POTENTIAL: Does not bioaccumulate

POTENTIAL TO MOVE FROM SOIL TO GROUNDWATER: No specific data available

OTHER ADVERSE ENVIRONMENTAL EFFECTS: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

CONTAINERS TO USE: No specific recommendations

RECOMMENDED DISPOSAL METHODS: Whatever cannot be saved for recovery or recycling should be disposed of in an approved waste facility in accordance with Federal, State/Provincial and Local requirements.

PHYSICAL AND CHEMICAL PROPERTIES THAT MAY AFFECT DISPOSAL ACTIVITIES: No specific information available

WHENEVER POSSIBLE, MATERIAL SHOULD NOT BE ALLOWED TO ENTER SEWAGE DISPOSAL SYSTEMS.

SPECIAL PRECAUTIONS FOR LANDFILL OR INCINERATION ACTIVITIES: No specific information available

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (49 CFR 172.101)

PROPER SHIPPING NAME (>5,250 pounds): other regulated substances, liquid, n.o.s. (Ethylene Glycol)
(<5,250 pounds): Antifreeze

HAZARD CLASS (>5,250 pounds): 9
(<5,250 pounds): non-hazardous liquid

UN/NA NUMBER: NA3082
PACKING GROUP: III
LABELS REQUIRED: Class 9, NA3082

SPECIAL PROVISIONS (172.102): none

PACKAGING AUTHORIZATIONS
- **A) EXCEPTIONS:** 173.155
- **B) NON-BULK PACKAGING:** 173.203
- **C) BULK PACKAGING:** 173.241

QUANTITY LIMITATIONS:
- **A) PASSENGER, AIRCRAFT OR RAILCAR:** no limit
- **B) CARGO AIRCRAFT ONLY:** no limit

VESSEL STOWAGE REQUIREMENTS
- **A) VESSEL STOWAGE:** Category A
- **B) OTHER:** none

IATA

UN NUMBER: 3082
PROPER SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s. (contains ethylene glycol)
CLASS: 9
PACKING GROUP: III
SPECIAL PROVISIONS: A97, A158

EXCEPTED QUANTITY
MAXIMUM PER INNER PACKAGE: 30 mL
MAXIMUM PER PACKAGE: 1.0 L

LIMITED QUANTITY
PACKING INSTRUCTION: Y964
MAXIMUM PER PACKAGE: 30 kg gross

PASSENGER AIRCRAFT
PACKING INSTRUCTION: 964
MAXIMUM PER PACKAGE: 450 L

CARGO AIRCRAFT:
PACKING INSTRUCTION: 964
MAXIMUM PER PACKAGE: 450L

ERG CODE: 9L

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): CAS # 107-21-1 is listed on the TSCA inventory

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Spills of this product over the RQ (Reportable Quantity) must be reported to the National Response Center. The RQ ethylene glycol, CAS Number 107-21-1, is 5,000 pounds. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulation.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

311/312 HAZARD CATEGORIES: Acute Health Hazard, Chronic Health Hazard

313 REPORTABLE INGREDIENTS: Ethylene Glycol, CAS Number 107-21-1

CLEAN WATER ACT (CWA): None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

CLEAN AIR ACT (CAA): CAS Number 107-21-1 (Ethylene Glycol) is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

STATE REGULATIONS:

California: This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.
Ethylene Glycol is on the Right to Know lists of: Massachusetts, Pennsylvania, New Jersey, Florida, Minnesota, Illinois, Rhode Island

INTERNATIONAL REGULATIONS:

Persistent Organic Pollutants (United Nations): not listed
Initial List of Prior Informed Consent Chemicals (United Nations): not listed
Ozone Depleting Substances (Montreal Protocol): not listed
Greenhouse Gases (Intergovernmental Panel on Climate Change): not listed

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES: Listed

CANADA: DOMESTIC SUBSTANCES LIST: Listed

CANADA WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS): D1B Toxic Materials. D2A Very toxic materials.

CANADIAN ENVIRONMENTAL PROTECTION AGENCY TOXICS LIST: not listed

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES: All of the ingredients are listed on the EINECS inventory

NEW ZEALAND: HSNO Approved

PHILLIPPINE INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES: listed

SECTION 16: OTHER INFORMATION

Prepared by: KMCO

Disclaimer: This product if FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY.

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